

Git

19 July 2025

20:48

What is git & GitHub ? --> repository

You need to install git & you need to access github repository (personal or enterprise)
Windows/ linux / MacOS

1. Installed the git
2. You need to create repository



Centralized location SCM

Local Desktop

=====

1. Installed the git
2. You need to create repository

```
C: D
Cd : repos
# git init SQL-Repo
# ls -la
.git
```

Main --branch
Develop

Remote repository --> it's available on github url
Local repository

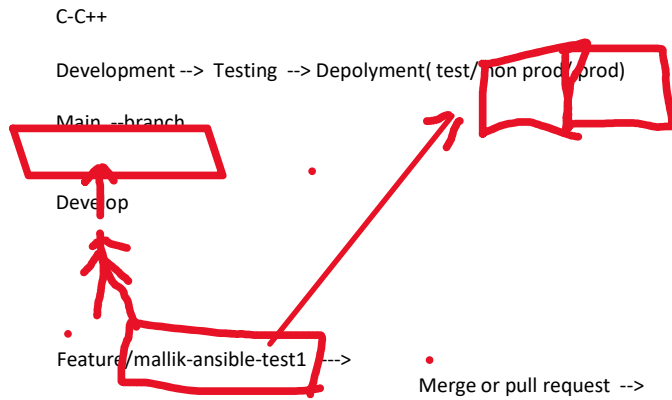
Pull
Push
Clone === repo1 cloned into your local
Fetch

Branch ? Isolated
In a team 5 members one is

ansible developer
Python developer
Java developer
Terraform developer
C / C ++ developer

Repository2
Main
Ansible -->
Python -->
Java
Terraform
C-C++

Development --> Testing --> Depolyment(test/ non prod/ prod)



```
# git init <repo>
Main ---> I have 10 files :
base branch

# git branch Develop

# git branch ansible-dev

# git switch Develop : you are in develop
10 files

I deleted 5 files

# git branch python-dev --- 5 files

# git branch

Main
*Ansible
Python
Java
C++

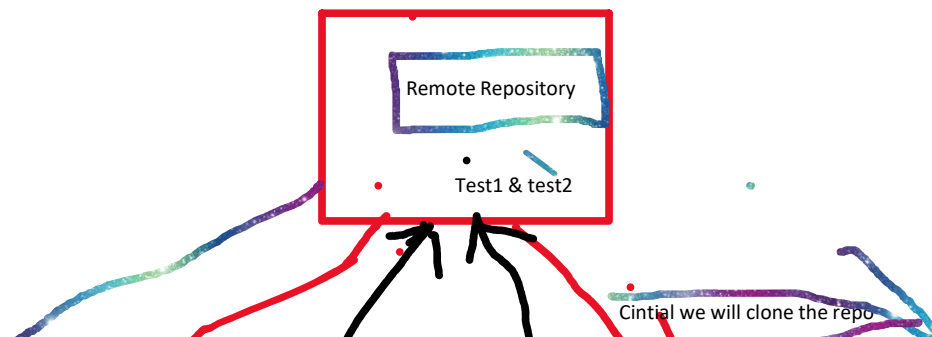
# git switch python
# git switch ansible
# git branch
# git branch feature/ansible-dev2
# git switch feature/ansible-dev2
# git branch

Patching.yml
Sql-db-pathcing.yml

# git add . --> staging area
# git commit -m "adding playing"

Local branch

# git push origin feature/ansible-dev2
```



Ansible --- agent less (Redhat)
Puppet
Chef
Slat

2000 srrvers

Unix server
Windows servers
Network Devices

Architehcure Ansible

Controle Node (Master) : Where we are going to install ansible (Unix Servers)
Managed Nodes: all your servers

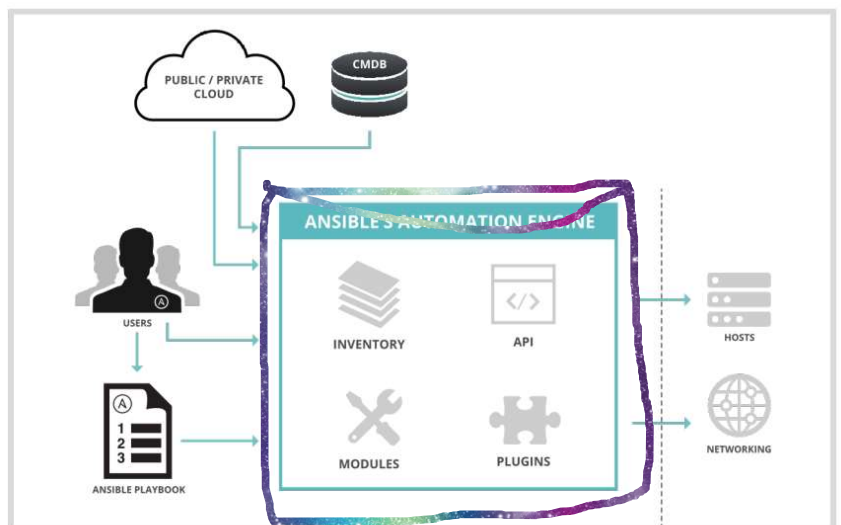
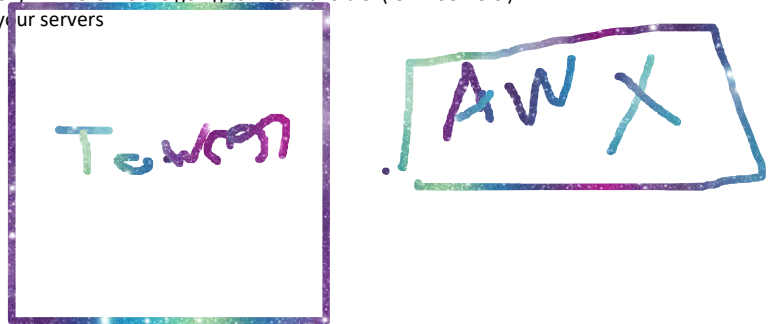


Figure 1.2: Ansible architecture

Screen clipping taken: 22-07-2025 10:48

Pre:

Controle
Python: 2.6 (unx)
Port 22

Managed: Unix
Python 2.6 or higher
SSH Protocol
Port 22
Username (Service Account)
password

Windows :

Username (Service Account)
password

Windows :
PowerShell : latest
.Net latest
Winrm Protocol
Port: 3985 / 3986
Username (Service Account)
Password

Password less Authentication

SSH key based Authentication
Public key
Private key

Private key will on Control Node
Public key on all managed Nodes

Push method
/home/ansible-svc/.ssh/authorized_keys

What is inventory

Static inventory
Dynamic Inventory

Installed the ansible

Yum install ansible

Rhel 8 onwards
python --version
ansible --version

/etc/ansible/ansible.cfg --> Important Configuration (Default)
in user home directory
in present Working dir
Environment Variable

Ansbl

/home/mallik
Ansible-playbook test.yml
Remote_user = <Service Account >

Ansible.cfg

```
# ansible --> adhoc command
# ansible-playbook
# ansible-playbook <playbook name>
# ansbl -
```

Inventory

Hosts
vars
tasks
Play
Playbooks
Modules

Indentation
Idempotation

Shell Script / Power Shell

Ansible playbook

File1
hello

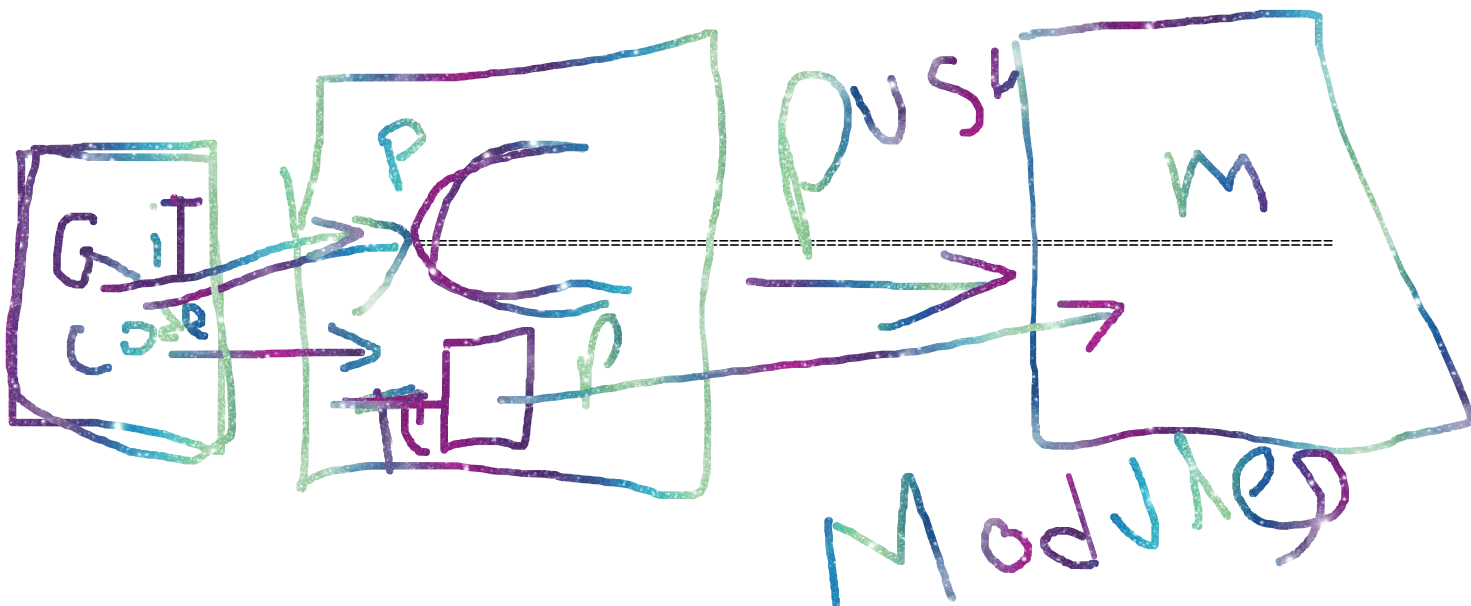
File2
hello

Cp file1 file2

Yml

- Nam: this is my playbook
- Hosts: host1
- Vars:
 - name: Os_version
 - nam2:
- Tasks:

=



5000 + modules

Copy file

Shell

Command

Copy.py

```
# ansible-doc -l --> all the modules
```

```
# ansible-doc shell
```

Each module we have number attributes

```
# ls -l
```

```
La -la
```

Cp file file2

Cp -r

Hosts

Variables :

String

Lists

Disctionaries

Tasks

Play

Playbook



One playbook may have multiple tasks and multiple playbook

Installing Ansible on Oracle linux

Oracle Linux 8/9

```
sudo dnf install -y oracle-epel-release-el8
```

```
sudo dnf config-manager --set-enabled ol8_developer_EPEL
```

```
sudo dnf install -y ansible
```

For Oracle Linux 7

```
sudo yum install -y oracle-epel-release-el7
```

```
sudo yum-config-manager --enable ol7_developer_EPEL
```

```
sudo yum install -y ansible
```

Installing Ansible on Ubuntu

```
$ sudo apt update
$ sudo apt install software-properties-common
$ sudo add-apt-repository --yes --update ppa:ansible/ansible
$ sudo apt install ansible
```

Installing Ansible on Debian

```
$ UBUNTU_CODENAME=jammy
$ wget -O- "https://keyserver.ubuntu.com/pks/lookup?fingerprint=on&op=get&search=0x6125E2A8C77F2818FB7BD15B93C4A3FD7BB9C367" | sudo gpg --dearmor -o /usr/share/keyrings/ansible-archive-keyring.gpg
$ echo "deb [signed-by=/usr/share/keyrings/ansible-archive-keyring.gpg]
http://ppa.launchpad.net/ansible/ansible/ubuntu $UBUNTU_CODENAME main" | sudo tee
/etc/apt/sources.list.d/ansible.list
$ sudo apt update && sudo apt install ansible
```